

### Status: Path 1 of [Dialog Information Services via Modem]  
### Status: Initializing TCP/IP using (UseTelnetProto 1 ServiceID pto-dialog)  
Trying 31060000009999...Open  
DIALOG INFORMATION SERVICES  
PLEASE LOGON:  
\*\*\*\*\* HHHHHHHH SSSSSSS?  
### Status: Signing onto Dialog  
\*\*\*\*\*  
ENTER PASSWORD:  
\*\*\*\*\* HHHHHHHH SSSSSSS? \*\*\*\*\*  
Welcome to DIALOG  
### Status: Connected

Dialog level 02.14.01D

Last logoff: 03jun03 09:25:20  
Logon file001 04jun03 12:29:05  
\*\*\* ANNOUNCEMENT \*\*\*  
\*\*\*

--File 581 - The 2003 annual reload of Population Demographics is complete. Please see Help News581 for details.

\*\*\*

--File 156 - The 2003 annual reload of ToxFile is complete. Please see HELP NEWS156 for details.

\*\*\*

--File 990 - NewsRoom now contains February 2003 to current records. File 992 - NewsRoom 2003 archive has been newly created and contains records from January 2003. The oldest month's records roll out of File 990 and into File 992 on the first weekend of each month. To search all 2003 records BEGIN 990, 992, or B NEWS2003, a new OneSearch category.

\*\*\*

--Connect Time joins DialUnits as pricing options on Dialog. See HELP CONNECT for information.

\*\*\*

--CLAIMS/US Patents (Files 340,341, 942) have been enhanced with both application and grant publication level in a single record. See HELP NEWS 340 for information.

\*\*\*

--SourceOne patents are now delivered to your email inbox as PDF replacing TIFF delivery. See HELP SOURCE1 for more information.

\*\*\*

--Important news for public and academic libraries. See HELP LIBRARY for more information.

\*\*\*

--Important Notice to Freelance Authors--  
See HELP FREELANCE for more information

\*\*\*

NEW FILES RELEASED

\*\*\*World News Connection (File 985)  
\*\*\*Dialog NewsRoom - 2003 Archive (File 992)  
\*\*\*TRADEMARKSCAN-Czech Republic (File 680)  
\*\*\*TRADEMARKSCAN-Hungary (File 681)  
\*\*\*TRADEMARKSCAN-Poland (File 682)

\*\*\*

UPDATING RESUMED

\*\*\*

RELOADED

\*\*\*Population Demographics -(File 581)  
\*\*\*CLAIMS Citation (Files 220-222)

REMOVED  
\*\*\*U.S. Patents Fulltext 1980-1989 (File 653)

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<  
>>> of new databases, price changes, etc. <<<  
\*\*\*\*\*

KWIC is set to 50.

HIGHLIGHT set on as '\*\*'

\* \* \* \* See HELP NEWS 225 for information on new search prefixes  
and display codes

\*\*\*

File 1:ERIC 1966-2003/May 27  
(c) format only 2003 The Dialog Corporation

Set Items Description

--- -----

Cost is in DialUnits

?b 155, 5, 73

04jun03 12:29:16 User259876 Session D508.1

\$0.32 0.093 DialUnits File1

\$0.32 Estimated cost File1

\$0.04 TELNET

\$0.36 Estimated cost this search

\$0.36 Estimated total session cost 0.093 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 155: MEDLINE(R) 1966-2003/May W4

(c) format only 2003 The Dialog Corp.

\*File 155: Medline has been reloaded and accession numbers have  
changed. Please see HELP NEWS 155.

File 5: Biosis Previews(R) 1969-2003/Jun W1

(c) 2003 BIOSIS

\*File 5: Alert feature enhanced for multiple files, duplicates  
removal, customized scheduling. See HELP ALERT.

File 73: EMBASE 1974-2003/May W4

(c) 2003 Elsevier Science B.V.

\*File 73: Alert feature enhanced for multiple files, duplicates  
removal, customized scheduling. See HELP ALERT.

Set Items Description

--- -----

?s (human (w) pluripoten (w) stem (w) cell?) and (toleragenic or tolerizing or toleranc  
e or immunotolerant)

Processing

Processing

18369668 HUMAN

2 PLURIPOSEN

308552 STEM

7815117 CELL?

0 HUMAN (W) PLURIPOSEN (W) STEM (W) CELL?

20 TOLERAGENIC

610 TOLERIZING

315595 TOLERANCE

167 IMMUNOTOLERANT

S1 0 (HUMAN (W) PLURIPOSEN (W) STEM (W) CELL?) AND  
(TOLERAGENIC OR TOLERIZING OR TOLERANCE OR  
IMMUNOTOLERANT)

?s (hES or hEG or (mesenchymal (w) stem (w) cell?)) and (toleragenic or tolerizing or t  
olerance or immunotolerant)

Processing

3524 HES

128 HEG

40320 MESENCHYMAL  
308552 STEM  
7815117 CELL?  
1766 MESENCHYMAL (W) STEM (W) CELL?  
20 TOLERAGENIC  
610 TOLERIZING  
315595 TOLERANCE  
167 IMMUNOTOLERANT  
S2 46 (HES OR HEG OR (MESENCHYMAL (W) STEM (W) CELL?)) AND  
(TOLERAGENIC OR TOLERIZING OR TOLERANCE OR  
IMMUNOTOLERANT)  
?s s2 and (CD90)  
46 S2  
296 CD90  
S3 0 S2 AND (CD90)  
?s s2 and (allograft?)  
46 S2  
87889 ALLOGRAFT?  
S4 0 S2 AND (ALLOGRAFT?)  
?s s2 and (cardiomyocytes)  
46 S2  
15423 CARDIOMYOCYTES  
S5 0 S2 AND (CARDIOMYOCYTES)  
?s s2 and (transplant or transplantation)  
46 S2  
152773 TRANSPLANT  
1278092 TRANSPLANTATION  
S6 10 S2 AND (TRANSPLANT OR TRANSPLANTATION)  
?rd  
...completed examining records  
S7 7 RD (unique items)  
?t s7/3,k/all

7/3,K/1 (Item 1 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

14806251 22617970 PMID: 12732877  
**Engineering \*mesenchymal\* \*stem\* \*cells\* for immunotherapy.**  
Jorgensen C; Djouad F; Apparailly F; Noel D  
[1] 1Service d'Immuno-Rhumatologie, Hopital Lapeyronie, Montpellier, France  
[2] 2INSERM U475, Montpellier, France.  
Gene therapy (England) May 2003 10 (10) p928-31, ISSN 0969-7128  
Journal Code: 9421525  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: In Process

**Engineering \*mesenchymal\* \*stem\* \*cells\* for immunotherapy.**  
Allogeneic hematopoietic stem cell \*transplantation\*, after sublethal irradiation of recipient animals, is capable of inducing donor-specific \*tolerance\* facilitating subsequent organ \*transplantation\*. This approach could reintroduce \*tolerance\* in autoimmune diseases and it has been applied to treat autoimmune diseases with, however, a great susceptibility of recurrence. \*Mesenchymal\*-\*stem\* \*cells\* (MSCs) present within the bone marrow could be critical to the immunosuppressive effect of the treatment. This \*tolerance\* induction may be useful in allogeneic transplantations, where low incidence of graft-versus-host disease was observed when the hematopoietic graft was coinjected with MSCs...

7/3,K/2 (Item 2 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

14140146 22302589 PMID: 12415309

Stem cell medicine enters the immune system.  
Bradley J Andrew; Bolton Eleanor M; Pedersen Roger A; et al  
Department of Surgery, Cambridge University Clinical School,  
Addenbrooke's Hospital, Cambridge CB2 2QQ, UK. jab@cam.ac.uk  
Nature reviews. Immunology (England) Nov 2002, 2 (11) p859-71,  
ISSN 1474-1733 Journal Code: 101124169  
Document type: Journal Article; Review; Review, Tutorial  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

Recent progress in deriving human embryonic stem (\*hES\*) cells and defining their capacity to differentiate has inspired hope that they could become a source of replacement cells for damaged or diseased tissues. We review the immunological barriers to transplanting \*hES\* cells and consider several potential solutions, including stem-cell banking, modification of the immunogenicity of donor cells and induction of \*tolerance\* to the graft. We evaluate the probable efficacy of these approaches with a view to facilitating the use of \*hES\* cells in clinical practice.

Descriptors: Immune System--physiology--PH; \*Stem Cell \*Transplantation\*; \*Stem Cells--immunology--IM; ABO Blood-Group System--immunology--IM; Blood Group Incompatibility; Chimera--immunology--IM; Histocompatibility; Histocompatibility Testing; Immune \*Tolerance\*; Immunosuppressive Agents --therapeutic use--TU

7/3, K/3 (Item 3 from file: 155)  
DIALOG(R)File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

08224010 94289964 PMID: 7517239  
[Autotransfusion with leap-frog technique in patients with coronary heart disease and planned aortocoronary venous bypass]  
Autotransfusion in Bocksprung-Technik bei Patienten mit koronarer Herzkrankheit und geplantem aortokoronarem Venenbypass.  
Kiesewetter H; Jung F; Pindur G; Koscielny J; Jakobs K; Wenzel E  
Abteilung fur Klinische Hamostaseologie und Transfusionsmedizin,  
Universitat des Saarlandes, Homburg/Saar, BRD.  
Infusionstherapie und Transfusionsmedizin (SWITZERLAND) Apr 1994, 21  
(2) p96-103, ISSN 1019-8466 Journal Code: 9209406  
Document type: Clinical Trial; Journal Article; Randomized Controlled  
Trial ; English Abstract  
Languages: GERMAN  
Main Citation Owner: NLM  
Record type: Completed

... The leap-frog technique was used. Within 8 weeks 3-4 erythrocyte concentrates and 0.9-1.2 liters plasma were sampled. The volume (verum: \*HES\* 200/0.5 10%; placebo: 0.9% NaCl solution) substituted corresponding to the volume of blood donated. Each patient received 200 mg Fe2+/day p.o. RESULTS: Clinically, only patients treated with \*HES\* in stage of autologous blood sampling benefited significantly. Two patients showed adverse effects. The peri- and postoperative course was comparable. In the NaCl group one...

... of the patients died pre- peri- or post-operatively. CONCLUSIONS: 40% of the cardiosurgical patients could be considered for autologous blood donation. Isovolemic hemodilution with \*HES\* 200/0.5 10% was a suitable and safe measure in preoperative blood sampling. Physical exercise should be performed before and after autologous blood donation. A reduced exercise \*tolerance\* suggests that autologous blood donation should be stopped.

...; and dosage--AD; Hetastarch--adverse effects--AE; Middle Age; Postoperative Complications--blood--BL; Sodium Chloride--administration and dosage--AD; Sodium Chloride--adverse effects--AE; Veins--\*transplantation\* --TR

7/3, K/4 (Item 4 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

07366660 92229827 PMID: 1373532

**The importance of a colloid in canine pancreas preservation.**

Ploeg R J; Boudjema K; Marsh D; Bruijn J A; Gooszen H G; Southard J H; Belzer F O

Department of Surgery, University of Wisconsin, Madison 53792.

Transplantation (UNITED STATES) Apr 1992, 53 (4) p735-41, ISSN 0041-1337 Journal Code: 0132144

Contract/Grant No.: 33554; PHS

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The role of hydroxyethyl starch (\*HES\*), the colloid component of the UW solution, was tested in canine pancreas preservation. Segmental pancreatic autografts were preserved for 48 hr cold storage with UW solution with \*HES\* (group 1) or UW solution without \*HES\* (group 2). After preservation, the pancreas was transplanted, and survival, serum glucose, serum amylase, intravenous glucose \*tolerance\* tests, tissue water content, and histology were compared between groups. In group 1 (with \*HES\*), 9/10 dogs were long-term survivors with one dog dying due to causes unrelated to preservation failure. In group 2 (without \*HES\*), 3/6 dogs died due to graft loss within one week posttransplant ( $P = 0.01$ ). No graft failure occurred in group 1 (0/9) versus graft loss in 4/6 dogs in group 2 ( $P = 0.04$ ). All animals in group 1 (with \*HES\*) showed normal serum glucose and amylase concentrations postoperatively, normal tissue water values after preservation,  $k$  values comparable to those observed after segmental autotransplantation without preservation, and relatively good histology. In group 2 (without \*HES\*), in 4/6 dogs graft failure occurred that led to the death (3 dogs) of the animals or to a diabetic state (1 dog). After 48-hr cold storage without \*HES\*, a significant increase in tissue water content, glucose and amylase levels was seen. After \*transplantation\*, hyperglycemia, hyperamylasemia, and clinical diabetes were observed in 4/6 dogs. Autopsy and histological evaluation showed evidence of thrombosis and ischemic insult. Two of 6...

... in group 2 remained normoglycemic during follow-up with borderline  $k$  values. The results suggested that for consistently successful 48-hr preservation of the pancreas, \*HES\* is an important component of the UW solution. Although a colloid may not be essential for short-term preservation of kidney and liver, it appears...

Descriptors: Colloids; \*Organ Preservation; \*Pancreas \*Transplantation\*; Amylases--blood--BL; Blood Glucose--analysis--AN; Body Water--metabolism--ME; Dogs; Glucose \*Tolerance\* Test; Hetastarch; Pancreas--pathology--PA; Pancreas \*Transplantation--mortality--MO; Solutions; \*Transplantation\*, Autologous

7/3, K/5 (Item 1 from file: 5)  
DIALOG(R) File 5: Biosis Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

13109875 BIOSIS NO.: 200100317024

**Role of \*mesenchymal\* \*stem\* \*cells\* (MSC) in allogeneic \*transplantation\*:  
Early phase I clinical results.**

AUTHOR: Lazarus Hillard(a); Curtin Peter; Devine Steve; McCarthy Philip; Holland Kent; Moseley Aimarie; Bacigalupo Andrea

AUTHOR ADDRESS: (a) Case Western Reserve University, Cleveland, OH\*\*USA

JOURNAL: Blood 96 (11 Part 1):p392a November 16, 2000

MEDIUM: print

CONFERENCE/MEETING: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000

SPONSOR: American Society of Hematology

ISSN: 0006-4971  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English

**Role of \*mesenchymal\* \*stem\* \*cells\* (MSC) in allogeneic \*transplantation\*: Early phase I clinical results.**

ABSTRACT: Human \*mesenchymal\* \*stem\* \*cells\* (MSCs) have the capacity to differentiate into a variety of tissues including bone marrow stroma, bone, cartilage, fat, muscle, and tendon. Although these cells exist...

...can be enriched and greatly expanded ex vivo > million-fold from a small BM aspirate without losing the ability to differentiate into multiple lineages. Co-\*transplantation\* of autologous \*mesenchymal\* \*stem\* \*cells\* with autologous HSCs has been previously reported to enhance HSC engraftment. Previous results indicate that MSCs exhibit very low immunogenicity as evaluated by T cell...

DESCRIPTORS:

...ORGANISMS: PARTS ETC: \*mesenchymal\* \*stem\* \*cells\*--

METHODS & EQUIPMENT: allogeneic stem cell \*transplantation\*--...

...hematopoietic, mesenchymal, phase I trial, therapeutic method, \*tolerance\*, \*transplantation method\*

7/3,K/6 (Item 1 from file: 73)

DIALOG(R)File 73:EMBASE

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11090740 EMBASE No: 2001109253

**Increased intestinal intra-epithelial T lymphocytes in primary glomerulonephritis. A role of oral \*tolerance\* breakdown in the pathophysiology of human primary glomerulonephritides?**

Rostoker G.; Delchier J.-C.; Chaumette M.-T.

Dr. G. Rostoker, Serv. Nephrol. et de Dialyse, Centre Hosp. Prive Claude Galien, 20 route de Boussy Saint-Antoine, 91480 Quincy Sous Senart France

Nephrology Dialysis Transplantation ( NEPHROL. DIAL. TRANSPLANT. ) ( United Kingdom) 2001, 16/3 (513-517)

CODEN: NDTRE ISSN: 0931-0509

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 24

**Increased intestinal intra-epithelial T lymphocytes in primary glomerulonephritis. A role of oral \*tolerance\* breakdown in the pathophysiology of human primary glomerulonephritides?**

Background. There is increasing evidence that some organ-specific and generalized autoimmune diseases in humans might be related to a breakdown of oral \*tolerance\*. We explored this hypothesis in human primary glomerulonephritides. We prospectively counted intraepithelial T lymphocytes in the duodenal mucosa (as a marker of rupture of oral \*tolerance\*), together with IgA1 and IgA2 mucosal plasma cells, in patients with primary glomerulonephritides. Methods. We investigated eight adults with immune-complex glomerulopathy (membranous nephropathy+membranoproliferative...

...during a clinical relapse related to gluten ingestion. (The latter disease is associated with increased numbers of intraepithelial T lymphocytes, and a breakdown of oral \*tolerance\* to gliadins is involved in the pathogenesis of coeliac disease). Duodenal fibroscopy was performed under neuroleptanalgesia. Four to six endoscopic biopsy specimens were taken from the second duodenum. Intraepithelial T lymphocytes were blindly counted on paraffin sections stained with haematein-eosin-saffron (\*HES\*), within the epithelium of a villus in a zone with at least 100 cells.

Mucosal IgA1 and IgA2 plasma cells were blindly counted in a...

...were increased in patients with coeliac disease. Conclusion. The significant increase in intestinal intraepithelial T lymphocytes in primary glomerulonephritides suggests a pathophysiological role of oral \*tolerance\* breakdown.

MEDICAL DESCRIPTORS:

...syndrome; idiopathic disease; immunoglobulin A nephropathy; celiac disease; diet; relapse; duodenoscopy; fiberscope endoscopy; neuroleptanalgesia; endoscopic biopsy; lymphocyte count; intestine villus; plasma cell; duodenum mucosa; immunological \*tolerance\*; human; clinical article; controlled study; adult; article; priority journal

SECTION HEADINGS:

- 005 General Pathology and Pathological Anatomy
- 006 Internal Medicine
- 026 Immunology, Serology and \*Transplantation\*
- 028 Urology and Nephrology
- 048 Gastroenterology

7/3, K/7 (Item 2 from file: 73)

DIALOG(R) File 73:EMBASE

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06089555 EMBASE No: 1995120047

**A new schedule of interleukin 2 for metastatic renal cell carcinoma: The Institut Gustave-Roussy study**

TRAITEMENT DU CANCER DU REIN METASTATIQUE AVEC UN NOUVEAU SCHEMA D'INTERLEUKINE 2: EXPERIENCE DE L'INSTITUT GUSTAVE-ROUSSY

Escudier B.; Farace F.; Theodore C.; Angevin E.; Court B.; Couanet D.; Dietrich P.Y.; Culin S.; Pallardy M.; Hercend T.; Droz J.P.

Unite d'Immunotherapie, Institut Gustave-Roussy, 39 Rue Camille-Desmoulins, 94805 Villejuif France

Bulletin du Cancer ( BULL. CANCER ) (France) 1995, 82/4 (296-302)

CODEN: BUCAB ISSN: 0007-4551

DOCUMENT TYPE: Journal; Article

LANGUAGE: FRENCH SUMMARY LANGUAGE: FRENCH; ENGLISH

...alone. Finally, when possible, surgery was performed on residual masses. Twenty five percent of objective responses (PR + CR) have been observed. Moreover, 12.3% CR \*hes\* been obtained after the overall therapy. The global mean survival is 15 months, with a mean survival of 8, 18 and 24 + months depending on the status of the disease (progressive, stable or responding) after initial treatment with IL2. \*Tolerance\* of this schedule was good with an actual received dose of 90% of the planned doses, and patients could leave the hospital within 2 hours...

SECTION HEADINGS:

- 016 Cancer
- 026 Immunology, Serology and \*Transplantation\*
- 028 Urology and Nephrology
- 037 Drug Literature Index
- 038 Adverse Reaction Titles

?ds

Set	Items	Description
S1	0	(HUMAN (W) PLURIPOTEN (W) STEM (W) CELL?) AND (TOLERAGENIC OR TOLERIZING OR TOLERANCE OR IMMUNOTOLERANT)
S2	46	(HES OR HEG OR (MESENCHYMAL (W) STEM (W) CELL?)) AND (TOLERAGENIC OR TOLERIZING OR TOLERANCE OR IMMUNOTOLERANT)
S3	0	S2 AND (CD90)
S4	0	S2 AND (ALLOGRAFT?)
S5	0	S2 AND (CARDIOMYOCYTES)
S6	10	S2 AND (TRANSPLANT OR TRANSPLANTATION)
S7	7	RD (unique items)

?rd s2

...completed examining records

S8 32 RD S2 (unique items)

?s s8 not s7  
32 S8  
7 S7  
S9 26 S8 NOT S7  
?s s9 and (MHC or HLA)  
26 S9  
92108 MHC  
179742 HLA  
S10 0 S9 AND (MHC OR HLA)  
?t s9/3,k/all

**9/3,K/1 (Item 1 from file: 155)**  
DIALOG(R)File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

11794585 99233482 PMID: 10215706  
**Peri-operative \*tolerance\* to large-dose 6% \*HES\* 200/0.5 in major urological procedures compared with 5% human albumin.**  
Vogt N; Bothner U; Brinkmann A; de Petriconi R; Georgieff M  
University of Ulm, Prittitzser, Ulm, Germany.  
Anaesthesia (ENGLAND) Feb 1999, 54 (2) p121-7, ISSN 0003-2409  
Journal Code: 0370524  
Document type: Clinical Trial; Journal Article; Randomized Controlled Trial  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

**Peri-operative \*tolerance\* to large-dose 6% \*HES\* 200/0.5 in major urological procedures compared with 5% human albumin.**  
We studied the long-term efficacy and safety of medium-molecular-weight hydroxyethyl starch (\*HES\*) administered in doses above 20 ml.kg<sup>-1</sup> during major blood replacement therapy. Blood replacement for 50 patients used 6% \*HES\* 200/0.5 (\*HES\* group) or 5% albumin (ALB group) and additional blood components according to a defined protocol. We compared safety, efficacy and costs in 4 peri-operative days. Colloid administration on the day of surgery was 38.4 ml.kg<sup>-1</sup> (\*HES\* group) and 35.1 ml.kg<sup>-1</sup> (ALB group). Haemodynamic, coagulation and renal function parameters were similar. Although total serum protein was still different on the third postoperative day (53.45 g l<sup>-1</sup> (\*HES\* group) and 60.6 g l<sup>-1</sup> (ALB group) (p < 0.01)) the colloid osmotic pressure always remained above 19.5 (2.5) mmHg (\*HES\* group). Blood loss (3810 (1632) ml (\*HES\* group) and 3455 (1733) ml (ALB group)) and the requirement for blood components was comparable. Costs were reduced by 35% (p < 0.05) in the \*HES\* group. We conclude that using 6% \*HES\* 200/0.5 as the only colloid for treatment even of large blood loss is a safe and economic alternative to albumin.

**9/3,K/2 (Item 2 from file: 155)**  
DIALOG(R)File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

11687724 99123307 PMID: 9924232  
**Critical haemoglobin concentration in anaesthetized dogs: comparison of two plasma substitutes.**  
Van der Linden P; Schmartz D; De Groote F; Mathieu N; Willaert P; Rausin I; Vincent J L  
Department of Anaesthesia, Erasme University Hospital, Free University of Brussels, Belgium.  
British journal of anaesthesia (ENGLAND) Oct 1998, 81 (4) p556-62,  
ISSN 0007-0912 Journal Code: 0372541  
Erratum in Br J Anaesth 1999 Apr;82(4) 658  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

We have explored systemic and regional \*tolerance\* to haemodilution during anaesthesia with two different synthetic colloids. Eighteen dogs undergoing mechanical ventilation during anaesthesia with ketamine were submitted to progressive normovolaemic haemodilution with either gelatin (GEL; n = 9) or hydroxyethylstarch (\*HES\*; n = 9) administered on a 1:1 ratio. Systemic oxygen delivery was calculated from measurement of thermodilution cardiac output and arterial oxygen content, while systemic

... delivery dependent) was mean 3.6 (SD 0.8) g dl<sup>-1</sup> in the GEL and 3.5 (1.5) g dl<sup>-1</sup> in the \*HES\* group. The mesenteric critical oxygen extraction ratio (O<sub>2</sub>ER) (GEL 50.1 (12.1)%; \*HES\* 48.5 (13.4)%) was significant lower than the systemic critical O<sub>2</sub>ER (GEL 66.1 (8.4)%; \*HES\* 67.7 (7.1)%). There were no significant differences between the GEL and \*HES\* groups for any of these variables, or in the amount of colloid administered. During the study, oxygen delivery decreased almost linearly with reduction in haemoglobin...

**9/3,K/3 (Item 3 from file: 155)**

DIALOG(R) File 155: MEDLINE(R)

(c) format only 2003 The Dialog Corp. All rts. reserv.

11398903 98280419 PMID: 9617425

**\*HES\*, dextran and gelatin--indications and \*tolerance\*]**

\*HES\*, Dextran und Gelatine--Indikationen und Vertraglichkeit.

Laubenthal H; Sirtl C

Klinik fur Anasthesiologie, Ruhr-Universitat Bochum, St. Josef-Hospital. Anasthesiologie, Intensivmedizin, Notfallmedizin, Schmerztherapie - AINS (GERMANY) Apr 1998, 33 (4) p251-5, ISSN 0939-2661 Journal Code: 9109478

Document type: Journal Article; Review; Review, Tutorial

Languages: GERMAN

Main Citation Owner: NLM

Record type: Completed

**\*HES\*, dextran and gelatin--indications and \*tolerance\*]**

\*HES\*, Dextran und Gelatine--Indikationen und Vertraglichkeit.

**9/3,K/4 (Item 4 from file: 155)**

DIALOG(R) File 155: MEDLINE(R)

(c) format only 2003 The Dialog Corp. All rts. reserv.

11364162 98244708 PMID: 9585309

**Hydroxyethyl starch antibodies in humans: incidence and clinical relevance.**

Dieterich H J; Kraft D; Sirtl C; Laubenthal H; Schimetta W; Polz W; Gerlach E; Peter K

Department of Anaesthesiology, University of Tubingen, Germany.  
hjdieter@med.uni-tuebingen.de

Anesthesia and analgesia (UNITED STATES) May 1998, 86 (5) p1123-6,  
ISSN 0003-2999 Journal Code: 1310650

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Hydroxyethyl starch (\*HES\*) is a plasma expander used for perioperative i.v. fluid management, as well as for resuscitation from trauma and shock. \*HES\* is very well tolerated, and the incidence of anaphylactic reactions is lower than with dextran or gelatin. Dextran anaphylaxis is caused by circulating dextran-reactive...

... G (IgG) class found in most adults. Histamine release from mast cells induces adverse reactions after gelatin infusion. The cause of adverse reactions due to \*HES\* is not yet clear. To investigate AB formation due to

\*HES\* , we collected sera of 1004 patients at least 14 yrs after starch administration. Using a highly sensitive enzyme-linked immunoabsorbent assay technique, we found one patient with a low 1:10 titer of \*HES\*-reactive ABs (immunoglobulin M [IgM] class). Despite repeated \*HES\* infusions, no clinical reaction could be detected in this patient. On the basis of a binomial distribution, a one-tailed confidence interval (99%) was used...

... the occurrence of ABs in general with maximum of 33 in 10,000 persons (IgM) and 23 in 10,000 persons (IgG). We suggest that \*HES\*-reactive ABs are extremely rare and that they do not necessarily induce anaphylaxis. Other mechanisms may be responsible for adverse reactions due to \*HES\*. Implications: The frequency of antibody formation due to hydroxyethyl starch, a commonly used plasma expander, was prospectively investigated in 1004 patients. Only one patient showed transient antibody formation, which was not harmful to the patient. This low antigenicity could explain the excellent \*tolerance\* of hydroxyethyl starch compared with other plasma expanders.

9/3, K/5 (Item 5 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

11319517 98199022 PMID: 9539614  
**Assessment of the safety and \*tolerance\* of 6% hydroxyethyl starch (200/0.5) solution: a randomized, controlled epidemiology study.**  
Bothner U; Georgieff M; Vogt N H  
Department of Anesthesiology and Intensive Care Medicine, University of Ulm, Germany. ulrich.bothner@m.cc.utah.edu  
Anesthesia and analgesia (UNITED STATES) Apr 1998, 86 (4) p850-5,  
ISSN 0003-2999 Journal Code: 1310650  
Document type: Clinical Trial; Journal Article; Randomized Controlled Trial  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

**Assessment of the safety and \*tolerance\* of 6% hydroxyethyl starch (200/0.5) solution: a randomized, controlled epidemiology study.**  
... side effects. This study was performed to contribute to the epidemiology of adverse reactions of the widely used 200/0.5 hydroxyethyl starch 6% solution (\*HES\*). Study end points were anaphylactoid reactions during preanesthesia infusion and perioperative course, and pruritus 5 days postoperatively (clinical examination and inquiry) and 8 wk after application (mailed patient questionnaire). We consecutively randomized 750 patients undergoing minor elective surgery into two parallel groups treated with \*HES\* (from two different manufacturers) and one control group treated with lactated Ringer's solution. The study population was well matched among the groups and consisted...

... of pruritus after 8 wk was quite frequent but not significantly different (chi<sup>2</sup> test, P = 0.77): 9.1% and 12.0% in the two \*HES\* groups and 11.5% in the lactated Ringer's solution control group. Except for pruritis, we conclude that \*HES\* was associated with no more complications than lactated Ringer's solution. Implications: Anaphylactoid reactions and pruritus (itching) after the administration of a 6% hydroxyethyl starch...

9/3, K/6 (Item 6 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

11207434 98084144 PMID: 9480149  
**[Autotransfusion using the bocksprung technique in patients with coronary heart disease and coronary artery bypass grafting]**  
Autotransfusion in Bocksprungtechnik bei Patienten mit koronarer

Herzkrankheit und geplant aortokoronarem Venenbypass.  
Koscielny J; Kiesewetter H; Jung F; Pindur G; Jakobs K; Wenzel E  
Abteilung fur Klinische Hamostaseologie und Transfusionsmedizin,  
Universitat des Saarlandes, Homburg, Deutschland.  
Beitrage zur Infusionstherapie und Transfusionsmedizin = Contributions to  
infusion therapy and transfusion medicine (SWITZERLAND) 1994, 32 p492-4  
, ISSN 1023-2028 Journal Code: 9442459  
Document type: Journal Article ; English Abstract  
Languages: GERMAN  
Main Citation Owner: NLM  
Record type: Completed

Clinically, only patients treated with \*HES\* in stage of autologous blood sampling benefited significantly. Two patients showed adverse effects. The peri- and postoperative course was comparable. In the NaCl group one...

... concentrates. None of the patients died pre-, peri- or postoperatively. 40% of the cardiosurgical patients could be considered for autologous blood donation. Isovolemic hemodilution with \*HES\* 200/0.5 10% was a suitable and safe measure in preoperative blood sampling. Physical exercise test should be performed before and after autologous blood donation. A reduced exercise \*tolerance\* suggests to stop autologous blood donation.

9/3,K/7 (Item 7 from file: 155)  
DIALOG(R)File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

10124309 22095355 PMID: 12100729  
**Herpes simplex virus 1 infected neuronal and skin cells differ in their susceptibility to complement attack.**  
Rautemaa Riina; Helander Tuula; Meri Seppo  
Department of Bacteriology and Immunology, Haartman Institute, University of Helsinki and the Helsinki University Central Hospital, Finland.  
riina.rautemaa@helsinki.fi  
Immunology (England) Jul 2002, 106 (3) p404-11, ISSN 0019-2805  
Journal Code: 0374672  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

... our aim was to study whether neuronal and skin cells differ in their ability to control complement attack during HSV-1 infection. Human embryonal skin (\*HES\*) cells and neuronal Paju cells were infected by HSV-1 in vitro. Both types of infected cells activated complement but were initially resistant to membrane...

... complex (MAC) deposition. During the first hours of infection the expression of the endogenous complement regulators decay accelerating factor (DAF) and CD59 increased on both \*HES\* and Paju cells. By 12 hr the infected \*HES\* cells had lost their ability to control complement attack. The expression of DAF and CD59 decreased and the cells became targets for MAC attack. In...

; Antigens, CD55--immunology--IM; Antigens, CD59--immunology--IM; Cell Culture; Complement Membrane Attack Complex--immunology--IM; Fluorescent Antibody Technique, Indirect; Immune \*Tolerance\*; Neurons--immunology--IM; Skin--immunology--IM; Tumor Cells, Cultured; Virus Replication

9/3,K/8 (Item 8 from file: 155)  
DIALOG(R)File 155: MEDLINE(R)  
(c) format only 2003 The Dialog Corp. All rts. reserv.

09756962 21561015 PMID: 11704445  
**Evaluation of a new hydroxyethyl starch solution (\*HES\* 130/0.4) in patients undergoing preoperative autologous blood donation.**

Kasper S M; Stromich A; Kampe S; Radbruch L  
Department of Anesthesiology, University of Cologne, 50924 Cologne,  
Germany. stefan-mario.kasper@medizin.uni-koeln.de  
Journal of clinical anesthesia (United States) Nov 2001, 13 (7)  
p486-90, ISSN 0952-8180 Journal Code: 8812166  
Document type: Clinical Trial; Clinical Trial, Phase II; Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

**Evaluation of a new hydroxyethyl starch solution (\*HES\* 130/0.4) in patients undergoing preoperative autologous blood donation.**

STUDY OBJECTIVE: To compare the \*tolerance\* and efficacy of the new hydroxyethyl starch (\*HES\*) 130/0.4 with a current \*HES\* solution (\*HES\* 200/0.5) in patients undergoing preoperative autologous blood donation as a model of surgical blood loss. \*HES\* 130/0.4 is expected to be a plasma substitute as efficacious as current \*HES\* solutions while offering such advantages as more complete renal elimination and reduced tissue storage.  
DESIGN: Controlled, randomized, double-blind, phase II clinical trial.  
SETTING: 1500...

... and meeting selection criteria for autologous blood donors.  
INTERVENTIONS: Collection of 500 mL of blood with simultaneous intravenous (IV) infusion of 500 mL of either \*HES\* 130/0.4 or \*HES\* 200/0.5 (mean molecular weight 130 kD and 200 kD, degree of substitution 0.4 and 0.5, respectively). MEASUREMENTS: Noninvasive measurements of heart...

... patient until one hour after blood donation and infusion of the study drugs. Adverse events elicited by postphlebotomy questionnaire were mild and probably unrelated to \*HES\* infusion. CONCLUSIONS: Intravenous infusion of 500 mL of the new \*HES\* 130/0.4 was tolerated well and maintained cardiovascular stability in patients undergoing preoperative autologous blood donation. \*HES\* 130/0.4 proved equivalent to \*HES\* 200/0.5 in every measured respect. Its pharmacokinetic profile may render \*HES\* 130/0.4 an attractive alternative to current \*HES\* solutions.

**9/3,K/9 (Item 9 from file: 155)**

DIALOG(R) File 155: MEDLINE(R)

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09374364 21137098 PMID: 11239024

**Increased intestinal intra-epithelial T lymphocytes in primary glomerulonephritis: a role of oral \*tolerance\* breakdown in the pathophysiology of human primary glomerulonephritides?**

Rostoker G; Delchier J C; Chaumette M T  
Service de Nephrologie et de Dialyse, Hopital Claude Galien, Quincy sous Senart, Centre Hospitalier Universitaire Henri Mondor, Creteil, France.  
Nephrology, dialysis, transplantation - official publication of the European Dialysis and Transplant Association - European Renal Association (England) Mar 2001, 16 (3) p513-7, ISSN 0931-0509 Journal Code: 8706402

Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

**Increased intestinal intra-epithelial T lymphocytes in primary glomerulonephritis: a role of oral \*tolerance\* breakdown in the pathophysiology of human primary glomerulonephritides?**

BACKGROUND: There is increasing evidence that some organ-specific and generalized autoimmune diseases in humans might be related to a breakdown of oral \*tolerance\*. We explored this hypothesis in human primary glomerulonephritides. We prospectively counted intraepithelial T lymphocytes in the duodenal mucosa (as a marker of rupture of oral \*tolerance\*), together with IgA1 and IgA2 mucosal plasma cells, in patients with primary glomerulonephritides. METHODS: We investigated eight adults

with immune-complex glomerulopathy (membranous nephropathy, membranoproliferative...)

... during a clinical relapse related to gluten ingestion. (The latter disease is associated with increased numbers of intraepithelial T lymphocytes, and a breakdown of oral \*tolerance\* to gliadins is involved in the pathogenesis of coeliac disease). Duodenal fibroscopy was performed under neuroleptanalgesia. Four to six endoscopic biopsy specimens were taken from the second duodenum. Intraepithelial T lymphocytes were blindly counted on paraffin sections stained with haematein-eosin-saffron (\*HES\*), within the epithelium of a villus in a zone with at least 100 cells. Mucosal IgA1 and IgA2 plasma cells were blindly counted in a...

... were increased in patients with coeliac disease. CONCLUSION: The significant increase in intestinal intraepithelial T lymphocytes in primary glomerulonephritides suggests a pathophysiological role of oral \*tolerance\* breakdown.

...; Disease--metabolism--ME; Celiac Disease--pathology--PA; Duodenum --pathology--PA; Glomerulonephritis--etiology--ET; Glomerulonephritis --metabolism--ME; Glomerulonephritis, IGA--metabolism--ME; Glomerulonephritis, IGA--pathology--PA; Immune \*Tolerance\*--physiology--PH; Immunoglobulin A--metabolism--ME; Kidney Diseases--immunology--IM; Kidney Diseases --metabolism--ME; Kidney Diseases--pathology--PA; Kidney Glomerulus; Lymphocyte Count; Nephrotic Syndrome--metabolism...

9/3,K/10 (Item 10 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

(c) format only 2003 The Dialog Corp. All rts. reserv.

07663724 93118967 PMID: 1476285

**Efficacy and \*tolerance\* of Elohes in plasma exchanges]**

Efficacite et \*tolerance\* de l'Elohes dans les echanges plasmatiques.

Guidet B; Staikowsky F; Vassal T; Offenstadt G; Amstutz P

Service de Reanimation polyvalente, Hopital Saint-Antoine, Paris.

Annales francaises d'anesthesie et de reanimation (FRANCE) 1992, 11 (5) p534-9, ISSN 0750-7658 Journal Code: 8213275

Document type: Clinical Trial; Journal Article; Randomized Controlled Trial ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: Completed

**Efficacy and \*tolerance\* of Elohes in plasma exchanges]**

Efficacite et \*tolerance\* de l'Elohes dans les echanges plasmatiques.

...48 h interval. During one PE, only albumin was administered (PEA), and during the other one, equal volumes of albumin and low molecular weight hydroxyethylstarch (\*HES\*) (Elohes) were given (PEA+E). The order in which these different protocols were used was random. Plasma was separated by filtration, and the total volume...

... central venous pressure (CVP). Plasma volume, calculated from the mean body haematocrit and blood volume, was measured before and after PE. The clinical and biological \*tolerance\* of the rapid infusion of a large volume of \*HES\* was also assessed. PE characteristics were similar in both groups. For PEA and PEA+E, PE lasted 152 +/- 21 min and 154 +/- 25 min; the...

; Adult; Albumins--administration and dosage--AD; Blood Pressure--drug effects--DE; Blood Proteins--analysis--AN; Central Venous Pressure--drug effects--DE; Drug \*Tolerance\*; Heart Rate--drug effects--DE; Middle Age; Plasma Exchange--methods--MT; Polymers--administration and dosage--AD; Prospective Studies; Starch--administration and dosage--AD

9/3,K/11 (Item 11 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

(c) format only 2003 The Dialog Corp. All rts. reserv.

05137854 86138588 PMID: 2419250

**Effect of Expafusion (\*HES\* 40/0.5) on the corpuscular elements of blood and inhibitors of blood coagulation]**

Einfluss von Expafusin (HAS 40/0.5) auf die korpuskularen Anteile des Blutes und die Inhibitoren der Blutgerinnung.

Kostering H; Giffhorn J; Negendank-Damenz B

Infusionstherapie und klinische Ernährung (SWITZERLAND) Dec 1985, 12

(6) p304-7, ISSN 0378-0791 Journal Code: 7613112

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: Completed

**Effect of Expafusion (\*HES\* 40/0.5) on the corpuscular elements of blood and inhibitors of blood coagulation]**

The present study reports on an investigation of 32 normal subjects who were given intravenously 500 ml of hydroxyethyl starch (\*HES\*) over 30 min. In 16 normal subjects, 500 ml of blood had been previously withdrawn over 20 min. \*Tolerance\* proved to be good. Side effects such as hyperergic reactions, influence on circulatory or cardiac function were not observed. Changes in corpuscular elements of blood did not exceed the dilution effect and mostly returned to the initial value 60 min after termination of \*HES\* infusion. The change in thrombocyte function, immunoglobulins and the inhibitors alpha 1-antitrypsin, alpha 2-macroglobulin, as well as C1-inactivator and C3-activator only...

... the Born chamber did not show any change which suggests that a clinically relevant effect on thrombocyte function and thus the danger of hemorrhage during \*HES\* administration can be excluded.

9/3,K/12 (Item 12 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

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02741661 78170666 PMID: 77256

**Clinical experiences with a 6% hydroxyethyl starch 40000 solution; metabolic parameters and \*tolerance\*]**

Klinische Erfahrungen mit einer 6% igen Hydroxyethylstarche-40000-Lösung--Kreislaufparameter, Verträglichkeit.

Kori-Lindner C; Hubert H

Infusionstherapie und klinische Ernährung (SWITZERLAND) Apr 1978, 5

(2) p93-8, ISSN 0378-0791 Journal Code: 7613112

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: Completed

**Clinical experiences with a 6% hydroxyethyl starch 40000 solution; metabolic parameters and \*tolerance\*]**

... a degree of substitution of 0.5--0.55 was tested under controlled conditions at 79 clinics in West Germany. The following parameters were evaluated: \*tolerance\*, circulation effectiveness, influence on serum electrolytes, hemoglobin and hematocrit. A total of 779 patients received either 6% \*HES\* 40 000 alone, 6% \*HES\* 40 000 and electrolyte solution or 6% \*HES\* 40 000 solution and other volume effective plasma substitutes for treatment of hypovolemia. The results show that stable circulation can be achieved in 4 to 6 hours during narcosis as well as in the subsequent phase with a sufficient supply of fluid through 6% \*HES\* 40 000 solution. One case of flush and a slight chill were reported as side effects related to the hydroxyethyl starch.

9/3,K/13 (Item 1 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

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13916805 BIOSIS NO.: 200200545626

The pharmacokinetics and tolerability of an intravenous infusion of the new hydroxyethyl starch 130/0.4 (6%, 500 mL) in mild-to-severe renal impairment.

AUTHOR: Jungheinrich Cornelius(a); Scharpf Roland; Wargenau Manfred; Beppeling Frank; Baron Jean-Francois

AUTHOR ADDRESS: (a)Clinical Research, Fresenius Kabi, 61346, Bad Homburg\*\* Germany E-Mail: Cornelius.Jungheinrich@fresenius-kabi.com

JOURNAL: Anesthesia & Analgesia 95 (3):p544-551 September, 2002

MEDIUM: print

ISSN: 0003-2999

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

**ABSTRACT:** Hydroxyethyl starches (\*HES\*) are almost exclusively excreted glomerularly, in part after hydrolysis by amylase. \*HES\* 130/0.4 (Voluven(R); Fresenius Kabi Deutschland GmbH, Bad Homburg, Germany) was developed to improve pharmacokinetics whereas preserving the efficacy of volume effect. We studied the dependency of pharmacokinetics of \*HES\* 130/0.4 on renal function. Nineteen volunteers with stable, nonanuric renal dysfunction, ranging from almost normal creatinine clearance (CLcr) to severe renal impairment (mean CLcr: 50.6 mL  $\text{min}^{-1}$   $\text{m}^{-2}$ ), were given a single infusion of 500 mL 6% \*HES\* 130/0.4 over 30 min. \*HES\* plasma concentrations were determined until 72 h, urinary excretion until 72-96 h. CLcr had been obtained at least twice before and twice after dosing...

...renal impairment. At CLcr  $\geq 30$ , 59% of the drug could be retrieved in urine, versus 51% at CLcr  $< 30$ . The mean molecular weight of \*HES\* in plasma was 62,704 d at 30 min, showing lower values with increased renal impairment ( $P = 0.04$ ). Predose amylase concentrations inversely correlated with baseline CLcr. Residual \*HES\* plasma concentrations after 24 h were small in all subjects ( $\leq 0.6 \text{ mg/mL}$ ). We conclude that \*HES\* 130/0.4 (500 mL 6%) can be safely administered to patients even with severe renal impairment, as long as urine flow is preserved, without...

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: ...artificial colloid, corn starch amylopectin derivative, efficacy, excretion, intravenous administration, molecular weight, peak concentration, pharmacokinetics, terminal half-life, \*tolerance\*

9/3, K/14 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
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13032736 BIOSIS NO.: 200100239885

**Acetyl starch, a possible alternative to hydroxyethyl starch as a plasma volume expander.**

ORIGINAL LANGUAGE TITLE: Acetyistarke als Volumenersatz, eine mogliche Alternative zu \*HES\*.

AUTHOR: Asskali F(a); Warnken U; Forster H

AUTHOR ADDRESS: (a)Universitatsklinikum, Theodor Stern-Kai 7, 60590, Frankfurt: asskali@em.uni-frankfurt.de\*\*Germany

JOURNAL: DMW Deutsche Medizinische Wochenschrift 126 (1-2):p1-6 5 January, 2001

MEDIUM: print

ISSN: 0012-0472

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: Russian; Non-English

SUMMARY LANGUAGE: English; Russian

ORIGINAL LANGUAGE TITLE: Acetyistarke als Volumenersatz, eine mogliche Alternative zu \*HES\*.

**ABSTRACT:** Objective: Pharmacokinetics and tolerability of acetyl starch

(ACS) in comparison to hydroxyethyl starch (\*HES\*) were investigated after repeated intravenous infusions. Methods and cohorts: A 500ml solution of ACS (n=8) or \*HES\* (n =9) was infused to male volunteers (Age 25-42 Years) over four hours on five consecutive days. Results: Comparing the pharmacokinetic parameters, marked differences were found between ACS and \*HES\*. A continuous increase of Cmax, AUC0-24 and t1/2 over the five days caused by administration of \*HES\* was due to an accumulation of \*HES\* in serum. However, after administration of ACS all these parameters remained unaltered. The repeated infusion of 50g ACS did not cause any changes of the acid-base-status. The influence of ACS on the coagulation parameters was comparable to that of \*HES\* and due to dilution effects. The acetic acid concentration increased up to 2,96 +- 0,67 mg/dl following ACS infusion. The blood glucose concentration was not influenced by the infusion of \*HES\* or of ACS. The repeated ACS infusions were well tolerated. In contrast to \*HES\*, ACS did not accumulate in serum. Conclusion: According to these data ACS is an alternative to \*HES\* for volume replacement. Well-known side effects due to long storage of \*HES\* in tissues may not occur following application of ACS. However, the wide usage of ACS is restricted by the limited stability of ACS solutions at...

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: ...intravenous administration, pharmacokinetics, plasma volume expander, \*tolerance\*;

9/3,K/15 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

10815880 BIOSIS NO.: 199799437025

**A clinical study to determine the safety and \*tolerance\* of \*HES\*-cryopreserved autologous red blood cells.**

AUTHOR: Sputtek A(a); Horn E P; Voll M(a); Hummel K(a); Hiller J(a); Luedemann K; Schulte Am Esch J; Kuehnl P(a)

AUTHOR ADDRESS: (a)Univ.-Krankenhaus Eppendorf, Abt. Transfusionsmedizin, Transplantationsimmunologie, D-20246 Hambu\*\*Germany

JOURNAL: Cryobiology 33 (6):p650 1996

CONFERENCE/MEETING: Thirty-third Annual Meeting of the Society for Cryobiology Indianapolis, Indiana, USA August 17-21, 1996

ISSN: 0011-2240

RECORD TYPE: Citation

LANGUAGE: English

**A clinical study to determine the safety and \*tolerance\* of \*HES\*-cryopreserved autologous red blood cells.**

9/3,K/16 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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10513974 BIOSIS NO.: 199699135119

**Genetical studies on salt \*tolerance\* at germination in recombinant inbred, isogenic, and doubled haploid lines of barley (Hordeum vulgare L.).**

AUTHOR: Mano Yoshiro; Takeda Kazuyoshi

AUTHOR ADDRESS: Res. Inst. Bioresources, Okayama Univ., Kurashiki 710\*\* Japan

JOURNAL: Bulletin of the Research Institute for Bioresources Okayama University 4 (1):p79-88 1996

ISSN: 0916-930X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English; Japanese

**Genetical studies on salt \*tolerance\* at germination in recombinant inbred, isogenic, and doubled haploid lines of barley (Hordeum vulgare L.)....**

**ABSTRACT:** To determine the relationship between morphological markers and salt \*tolerance\* at germination in barley (*Hordeum vulgare L.*), a total of 125 recombinant inbred (RI) lines of Russia 6 times \*HES\* 4, a series of 70 isogenic (IG) lines for V/v gene derived from Russia 6 times \*HES\* 4, and 145 doubled haploid (DH) lines of Leger times CI 9831 were evaluated for their salt \*tolerance\* at germination. Comparison between each set of character pairs revealed that the six-rowed type was significantly more tolerant than the two-rowed type in the RI and IG lines of Russia 6 times \*HES\* 4, and the two-rowed type and the short haired rachilla type were significantly more tolerant than the six-rowed type and the long haired rachilla type in the DH lines of Leger times CI 9831. On the other hand, no significant difference was observed in salt \*tolerance\* such as the smoothness of awn, ear density, and lemma color. The findings suggested that v (kernel row) and s (rachilla hair length) genes related with genetic factors controlling salt \*tolerance\* at germination, while r (awn type), l (ear density), and Re-2 (lemma color) genes inherited independent of gene(s) for salt \*tolerance\* at germination.

**MISCELLANEOUS TERMS:** ...SALT \*TOLERANCE\*

9/3,K/17 (Item 5 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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10188748 BIOSIS NO.: 199698643666

**Post-transfusion life expectancy and \*tolerance\* of hydroxyethyl starch-cryopreserved erythrocytes: Experiences of the autologous retransfusion model in dogs.**

AUTHOR: Langer R(a); Henrich H A

AUTHOR ADDRESS: (a)Chirurgische Universitaetsklin. Exp. Chirurgie, Josef-Schneider-Str. 2, D-97080 Wuerzburg\*\*Germany

JOURNAL: Infusionstherapie und Transfusionmedizin 22 (SUPPL. 1):p27-29 1995

ISSN: 1019-8466

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: German; Non-English

SUMMARY LANGUAGE: German; English

**Post-transfusion life expectancy and \*tolerance\* of hydroxyethyl starch-cryopreserved erythrocytes: Experiences of the autologous retransfusion model in dogs.**

...**ABSTRACT:** were carried out with dog erythrocytes as an animal model for human erythrocytes. Caused by hemolysis 30% of the erythrocytes formerly cryopreserved with hydroxyethyl starch (\*HES\*) (200000/0.5; 12.5%) could not be labeled with 51Cr. All the cryopreserved labeled erythrocytes showed the same in vivo survival as labeled fresh red cells. After autologous substitution of 10% of the dog's blood by the \*HES\* cryopreserve, the \*HES\* plasma level decreased, following a first-order kinetics with  $t_{1/2} = 4$  h. Concerning the blood flow behavior, a transient reduction by the cryopreserved erythrocytes was seen, while the \*HES\* had adverse as well as beneficial effects. By further improvement the preserve should become suitable for clinical application.

9/3,K/18 (Item 6 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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09315261 BIOSIS NO.: 199497323631

**Autotransfusion using leap-frog technique in patients with coronary heart disease and planned aortocoronary venous bypass.**

AUTHOR: Kiesewetter H(a); Jung F; Pindur G; Koscielny J; Jacobs K; Wenzel E  
AUTHOR ADDRESS: (a)Abteilung Klinische Hamostaseologie Transfusionsmedizin,

Univ. Saarlandes, D-6600 Homburg/Saar\*\*Germany  
JOURNAL: Infusionstherapie und Transfusionmedizin 21 (2):p96-103 1994  
ISSN: 1019-8466  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: German; Non-English  
SUMMARY LANGUAGE: German; English

...ABSTRACT: solution) substituted corresponded to the volume of blood donated. Each patient received 200 mg Fe-2+/day p.o. Results: Clinically, only patients treated with \*HES\* in stage of autologous blood sampling benefitted significantly. Two patients showed adverse effects. The peri- and postoperative course was comparable. In the NaCl group one...

...None of the patients died pre-, peri- or postoperatively. Conclusions: 40% of the cardiosurgical patients could be considered for autologous blood donation. Isovolemic hemodilution with \*HES\* 200/0.5 10% was a suitable and safe measure in preoperative blood sampling. Physical exercise should be performed before and after autologous blood donation. A reduced exercise \*tolerance\* suggests that autologous blood donation should be stopped.

9/3,K/19 (Item 7 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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08752879 BIOSIS NO.: 199395042230

**Comparing 6 percent hydroxyethylstarch with albumin during plasma exchanges.**

AUTHOR: Guidet B(a); Staikowsky F; Vassal T; Offenstadt G; Amstutz P  
AUTHOR ADDRESS: (a)Service Reanimation Polyvalente, Hopital Saint-Antoine,  
184, rue du Faubourg Saint-Antoine, 7501\*\*France  
JOURNAL: Annales Francaises d'Anesthesie et de Reanimation 11 (5):p534-539  
1992  
ISSN: 0750-7658  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: French; Non-English  
SUMMARY LANGUAGE: French; English

...ABSTRACT: 48 h interval. During one PE, only albumin was administered (PEA), and during the other one, equal volumes of albumin and low molecular weight hydroxyethylstarch (\*HES\*) (Elohes) were given (PEA + E). The order in which these different protocols were used was random. Plasma was separated by filtration, and the total volume...

...central venous pressure (CVP). Plasma volume, calculated from the mean body haematocrit and blood volume, was measured before and after PE. The clinical and biological \*tolerance\* of the rapid infusion of a large volume of \*HES\* was also assessed. PE characteristics were similar in both groups. For PEA and PEA + E, PE lasted 152 +- 21 min and 154 +- 25 min; the...

...PEA +- E group, but without any clinical consequences. PE was well tolerated, with blood pressure and plasma volume remaining stable in patients given both a \*HES\* and albumin, whereas there was a decrease in blood and central venous pressures in the same patients when they were given albumin alone. The cumulative effects of \*HES\*, when used in several consecutive PE, remain to be assessed.

9/3,K/20 (Item 8 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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06140692 BIOSIS NO.: 000085103844

AN EXPERIMENTAL STUDY ON FLUOSOL DA AS A BLOOD SUBSTITUTE  
AUTHOR: HIGUCHI T; KATO T; SAKAI M; HORIKAWA H; ICHIYANAGI K  
AUTHOR ADDRESS: DEP. ANESTHESIOL., YAMAGATA UNIV., SCH. MED.  
JOURNAL: BULL YAMAGATA UNIV (MED SCI) 6 (1). 1988. 11-24. 1988  
FULL JOURNAL NAME: Bulletin of the Yamagata University (Medical Science)  
CODEN: YMJOD  
RECORD TYPE: Abstract  
LANGUAGE: JAPANESE

**ABSTRACT:** The usefulness of Fluosol-DA(FDA) as a blood substitute was examined in the anesthetized dogs. The blood was diluted with FDA or \*HES\* (hydroxyethyl starch), another plasma substitute, to a hematocrit value of 5% or 3%; then hemorrhagic shock with a mean arterial pressure of 40 mmHg was imposed for 30 min. Changes in the cardiovascular parameters, oxygen consumption and adenine nucleotides of the hepatic tissue were measured, and \*tolerance\* to the hemorrhagic shock was recorded. The results of the experiment, especially the survival rate and adenylate energy charge potential, indicated that FDA is far superior to \*HES\* as oxygen carrier and it may be useful in certain clinical circumstances.

9/3, K/21 (Item 1 from file: 73)  
DIALOG(R) File 73:EMBASE  
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11404763 EMBASE No: 2001415750  
**Cryopreservation of red blood cells using hydroxyethyl starch (\*HES\*) - From laboratory investigations to clinical application**  
KRYOKONSERVIERUNG VON ERYTHROZYTEN MIT HYDROXYETHYLSTARKE (\*HES\*) - VOM LABORVERSUCH ZUR KLINISCHEN ANWENDUNG  
Sputtek A.; Horn E.-P.; Schulte am Esch J.; Kuhnl P.  
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Anasthesiologie Intensivmedizin Notfallmedizin Schmerztherapie,  
Supplement ( ANASTHESIOL. INTENSIVMED. NOTF.MED. SCHMERZTHER. SUPPL. ) ( Germany ) 2001, 36/2 (S162-S164)  
CODEN: AINSF ISSN: 1430-7790  
DOCUMENT TYPE: Journal ; Short Survey  
LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH; GERMAN  
NUMBER OF REFERENCES: 10

**Cryopreservation of red blood cells using hydroxyethyl starch (\*HES\*) - From laboratory investigations to clinical application**  
KRYOKONSERVIERUNG VON ERYTHROZYTEN MIT HYDROXYETHYLSTARKE (\*HES\*) - VOM LABORVERSUCH ZUR KLINISCHEN ANWENDUNG

... clinical practice, cryopreservation may help to overcome the outdated of autologous blood deposits for elective surgery. In contrast to the established cryoprotectant glycerol, the colloid \*HES\* need not be removed after thawing. Methods and results: After in vitro and animal experiments, autologous studies using an optimised \*HES\* protocol were carried out on 7 healthy volunteers. The first clinical application was the case of a 16 year old female patient. Recently, a clinical study to determine the safety and \*tolerance\* of red blood cells cryopreserved with the \*HES\* has been performed. The first RBC concentrate obtained from each of 36 patients undergoing preoperative autologous blood donation was randomly assigned to the conventional storage method (4degreesC, PAGGS-mannitol = group 1) or to cryopreservation with \*HES\* (MW = 200,000, MS = 0.5) at a final concentration of 11.5% (w/w) using liquid nitrogen (= groups 2, 3). Group 2: postthaw washing...

...after reinfusion of washed or unwashed cryopreserved RBC were observed. The data suggested that the administration of one autologous unit of RBC after cryopreservation with \*HES\* is safe and well tolerated. Outlook: Further investigations are necessary to evaluate the effects of the

transfusion of larger volumes of homologous \*HES\* cryopreserved RBC.

9/3,K/22 (Item 2 from file: 73)  
DIALOG(R)File 73:EMBASE  
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10904961 EMBASE No: 2000389979

**Hydroxyethyl starches**

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Acta Anaesthesiologica Italica / Anaesthesia and Intensive Care in Italy ( ACTA ANAESTHESIOL. ITAL. ANAESTH. INTENSIVE CARE ITALY ) (Italy) 2000

, 51/2 (135-144)

CODEN: AAAIF ISSN: 1124-8882

DOCUMENT TYPE: Journal; Conference Paper

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH; ITALIAN

NUMBER OF REFERENCES: 49

...the adverse effects of hemocoagulation are directly proportionate to solute concentration, so that starches with low MW have little or no effect on hemostasis. Immunologic \*tolerance\* also appears to be excellent and allergic reactions to be totally endurable. \*HES\* are therefore the synthetic products with pharmacological properties closest to natural colloids. In addition, their beneficial effects are related more to their anti-inflammatory action...

9/3,K/23 (Item 3 from file: 73)

DIALOG(R)File 73:EMBASE

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07170488 EMBASE No: 1998060340

**Randomized comparative multicenter study of hydroxyethyl starch versus albumin as a plasma expander in cirrhotic patients with tense ascites treated with paracentesis**

Altman C.; Bernard B.; Roulot D.; Vitte R.-L.; Ink O.

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European Journal of Gastroenterology and Hepatology ( EUR. J.

GASTROENTEROL. HEPATOL. ) (United Kingdom) 1998, 10/1 (5-10)

CODEN: EJGHE ISSN: 0954-691X

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 23

...costly therapy for ascites in patients with cirrhosis. The aim of this study was to compare the use of a synthetic plasma expander, hydroxyethyl starch (\*HES\*), with that of albumin. Design: Sixty cirrhotic patients with ascites were studied. Patients were randomly assigned to be infused with either albumin (8 g/l of ascites removed, n = 33) or \*HES\* (200 ml/l of ascites removed, n = 27). None of the patients was treated with diuretics or had renal impairment or hyponatremia at entry. Clinical...

...clinical and laboratory parameters between the two groups at entry into the study. None of the patients developed renal impairment during the trial. One patient (\*HES\* group) presented with hyponatremia. Plasma atrial natriuretic factor and aldosterone levels did not differ between the two groups at baseline or at 1 and 3 days after paracentesis. The volume of ascites removed did not differ between the albumin (7.9 +/- 4.4 l) and \*HES\* (6.9 +/- 5.3 l) groups. However, there was a significant difference in weight loss between the albumin and \*HES\* groups (7.9 +/- 5.2 kg vs 4.7 +/- 3.4 kg; p = 0.01). Clinical and laboratory parameters indicated that \*HES\* was well tolerated except for hypoalbuminemia. Conclusion: \*HES\* is well tolerated in patients with cirrhosis. There is no difference between \*HES\* and albumin in the prevention of complications related to large-volume paracentesis. The lesser degree of weight loss observed with

\*HES\* needs further study  
MEDICAL DESCRIPTORS:

aldosterone blood level; blood level; weight reduction; hyponatremia  
--etiology--et; hypoalbuminemia--etiology--et; hypoalbuminemia--side effect  
--si; drug \*tolerance\*; plasma volume; human; male; female; major clinical  
study; controlled study; aged; adult; intravenous drug administration;  
clinical trial; randomized controlled trial; multicenter study; article;  
priority journal

9/3,K/24 (Item 4 from file: 73)

DIALOG(R)File 73:EMBASE

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05209138 EMBASE No: 1992349372

**Pharmacology of low molecular weight hydroxyethylstarches**

PHARMACOLOGIE DES HYDROXYETHYLAMIDONS DE BAS POIDS MOLECULAIRE

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Annales Francaises d'Anesthesie et de Reanimation ( ANN. FR. ANESTH.  
REANIM. ) (France) 1992, 11/5 (509-515)

CODEN: AFARE ISSN: 0750-7658

DOCUMENT TYPE: Journal; Article

LANGUAGE: FRENCH SUMMARY LANGUAGE: FRENCH; ENGLISH

...a result, the cost of plasma volume expansion became so high that it justified finding safe and cheaper alternatives to HSA. Low molecular weight, hydroxyethylstarches (\*HES\*) are the synthetic colloids which are closest to HSA. \*HES\* are modified natural polymers whose physico-chemical properties are defined by their molecular weight and molar substitution ratio. Average molecular weights of these polydispersed solutions...

...in number). Hydroxyethylation, which slows down hydrolysis by alpha-amylase, is best quantified by the molar substitution ratio between the proportions of hydroxyethylether and glucose. \*HES\* have pharmacokinetic properties which are independent of molecular weight and directly related to the molar substitution ratio. The two \*HES\* available in France are Elohes(R) and Lomol(R), Elohes(R), at a concentration of 6%, has a colloid-osmotic effect close to that of...

...initial effect is greater than that of Elohes (R), but it is eliminated more rapidly because its lower molar substitution ratio (0.45). The good \*tolerance\* to these products is also an advantage in comparison with the other colloids.

9/3,K/25 (Item 5 from file: 73)

DIALOG(R)File 73:EMBASE

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03164145 EMBASE No: 1986141722

**Influence of \*HES\* 40/0.5 on corpuscular elements of blood and inhibitors of blood coagulation**

EINFLUSS VON EXPAFUSIN (HAS 40/0,5) AUF DIE KORPUSKULAREN ANTEILE DES BLUTES UND DIE INHIBITOREN DER BLUTGERINNUNG

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Infusionstherapie und Klinische Ernahrung - Forschung und Praxis ( INFUSIONSTHER. KLIN. ERNAHR. FORSCH. PRAX. ) (Switzerland) 1985, 12/6 (304-307)

CODEN: IKEFA

DOCUMENT TYPE: Journal

LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH

**Influence of \*HES\* 40/0.5 on corpuscular elements of blood and inhibitors**

## of blood coagulation

The present study reports on an investigation of 32 normal subjects who were given intravenously 500 ml of hydroxyethyl starch (\*HES\*) over 30 min. In 16 normal subjects, 500 ml of blood had been previously withdrawn over 20 min. \*Tolerance\* proved to be good. Side effects such as hyperergic reactions, influence on circulatory or cardiac function were not observed. Changes in corpuscular elements of blood did not exceed the dilution effect and mostly returned to the initial value 60 min after termination of \*HES\* infusion. The change in thrombocyte function, immunoglobulins and the inhibitors alphainf 1-anti-trypsin, alphainf 2-macroglobulin, as well as Cinf 1-inactivator and Cinf...

...the Born chamber did not show any change which suggests that a clinically relevant effect on thrombocyte function and thus the danger of hemorrhage during \*HES\* administration can be excluded.

9/3,K/26 (Item 6 from file: 73)

DIALOG(R) File 73:EMBASE

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01182298 EMBASE No: 1978313491

**Clinical experience with 6% hydroxyethyl starch 40000 solution.**

**Circulation parameters. \*Tolerance\***

KLINISCHE ERFAHRUNGEN MIT EINER 6%IGEN HYDROXYATHYLSTARKE 40000 LOSUNG:  
KREISLAUFPARAMETER, VERTRAGLICHKEIT

Kori-Lindner C.; Hubert H.

Ebrardstr. 91 a, Erlangen Germany

Infusionstherapie und Klinische Ernährung - Forschung und Praxis (INFUSIONSTHER. KLIN. ERNAHR. FORSCH. PRAX. ) (Switzerland) 1978, 5/2 (93-98)

CODEN: IKEFA

DOCUMENT TYPE: Journal

LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH

**Clinical experience with 6% hydroxyethyl starch 40000 solution.**

**Circulation parameters. \*Tolerance\***

...a degree of substitution of 0.5-0.55 was tested under controlled conditions at 79 clinics in West Germany. The following parameters were evaluated: \*tolerance\*, circulation effectiveness, influence on serum electrolytes, hemoglobin and hematocrit. A total of 779 patients received either 6% \*HES\* 40 000 alone, 6% \*HES\* 40 000 and electrolyte solution or 6% \*HES\* 40 000 solution and other volume effective plasma substitutes for treatment of hypovolemia. The results show that stable circulation can be achieved in 4 to 6 hours during narcosis as well as in the subsequent phase with a sufficient supply of fluid through 6% \*HES\* 40 000 solution. One case of flush and a slight chill were reported as side effects related to the hydroxyethyl starch.

MEDICAL DESCRIPTORS:

\*circulation; \*clinical study; \*drug \*tolerance\*; \*electrolyte blood level; \*hematocrit; \*hypovolemia; \*drug therapy

?ds

Set	Items	Description
S1	0	(HUMAN (W) PLURIPOTEN (W) STEM (W) CELL?) AND (TOLERAGENIC OR TOLERIZING OR TOLERANCE OR IMMUNOTOLERANT)
S2	46	(HES OR HEG OR (MESENCHYMAL (W) STEM (W) CELL?)) AND (TOLERAGENIC OR TOLERIZING OR TOLERANCE OR IMMUNOTOLERANT)
S3	0	S2 AND (CD90)
S4	0	S2 AND (ALLOGRAFT?)
S5	0	S2 AND (CARDIOMYOCYTES)
S6	10	S2 AND (TRANSPLANT OR TRANSPLANTATION)
S7	7	RD (unique items)
S8	32	RD S2 (unique items)
S9	26	S8 NOT S7

S10 0 S9 AND ( [REDACTED] OR HLA)  
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\$3.36 16 Type(s) in Format 3  
\$3.36 16 Types  
\$7.56 Estimated cost File155  
\$7.72 1.379 DialUnits File5  
\$15.75 9 Type(s) in Format 3  
\$15.75 9 Types  
\$23.47 Estimated cost File5  
\$18.80 2.032 DialUnits File73  
\$20.40 8 Type(s) in Format 3  
\$20.40 8 Types  
\$39.20 Estimated cost File73  
OneSearch, 3 files, 4.724 DialUnits FileOS  
\$2.56 TELNET  
\$72.79 Estimated cost this search  
\$73.15 Estimated total session cost 4.817 DialUnits

### Status: Signed Off. (11 minutes)

Set Name Query

side by side

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; THES=ASSIGNEE;  
PLUR=YES; OP=AND

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
			result set
<u>L12</u>	Hillard-Lazarus.in.	0	<u>L12</u>
<u>L11</u>	Lazarus-hillard.in.	0	<u>L11</u>
<u>L10</u>	(hES or hEG or (pluripotent adj stem)) same (cardiomyocyte)	31	<u>L10</u>
<u>L9</u>	((mesenchymal adj stem) adj cell) same (immunotolerant or toleragenic or tolerance or tolerizing)	7	<u>L9</u>
<u>L8</u>	L6 not L7	16	<u>L8</u>
<u>L7</u>	L6 and (cardiomyocyte)	10	<u>L7</u>
<u>L6</u>	L5 and ((mesenchymal adj stem) or (CD90))	26	<u>L6</u>
<u>L5</u>	L4 and (allograft or transplant or transplantation)	972	<u>L5</u>
<u>L4</u>	(hES or hEG or (pluripotent adj stem)) and (immunotolerant or tolerizing or tolerance or toleragenic)	18173	<u>L4</u>
<u>L3</u>	L2 and (hES or hEG)	7	<u>L3</u>
<u>L2</u>	Kay-robert-M\$.in.	31	<u>L2</u>
<u>L1</u>	Chiu-choy-pik.in.	5	<u>L1</u>

END OF SEARCH HISTORY